

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A process for sequestering carbon emitted into the atmosphere, characterized in that it comprises:
 - a) a step for concentrating CO₂ in the liquid phase;
 - b) a step for electro-reduction in an aprotic medium to a compound in which the carbon changes to oxidation number +3 in the form of oxalic acid or formic acid;
 - c) if appropriate, a step for re-extracting oxalic or formic acid in the aqueous phase; and
 - d) a step for mineralization by reacting said compound with a compound of an element M, producing a mineral in which the atomic ratio C/M is about 2/1.
2. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase consists of liquefying CO₂, the liquid CO₂ then being obtained under pressure, for example in the supercritical state.
3. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase consists of absorbing CO₂ in a polar aprotic liquid, not miscible with water or miscible with water in various proportions.
4. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase consists of absorbing CO₂ in an aprotic ionic liquid not miscible with water or miscible with water in various proportions.
5. (Original) A process according to claim 4, characterized in that said ionic liquid consists of 1-butyl-3-methylimidazolium hexafluorophosphate.

6. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase consists of absorbing CO₂ in an aqueous phase containing an alcohol and/or an amine.
7. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase consists of absorbing CO₂ in the hydrated form, said concentration being activated by an enzymatic pathway.
8. (Original) A process according to claim 7, characterized in that the hydration activating enzyme is carbonic anhydrase.
9. (Currently Amended) A process according to claim 8, characterized in that the solution obtained is then recycled to a process for absorption of CO₂ in the an aqueous phase in the presence of an alcohol and/or amine ~~in accordance with claim 6~~.
10. (Currently Amended) A process according to ~~claim 6 or claim 9~~, characterized in that the aqueous solution obtained is recycled to a liquefaction process ~~in accordance with claim 2~~ of CO₂ under pressure.
11. (Currently Amended) A process according to ~~claim 6 or claim 7~~, characterized in that the aqueous solution obtained is transferred to an ionic liquid medium which is insoluble in water by a liquid-liquid extraction process.
12. (Currently Amended) A process according to ~~one of claims 1 to 11~~ claim 1, in which the electro-reduction step b) is carried out at a pH in the range 3 to 10 and with an anode maintained at a potential of +0.5 to -3.5 volts with respect to the normal hydrogen electrode.
13. (Original) A process according to claim 12, in which the pH is in the range 3 to 7.
14. (Currently Amended) A process according to claim 12 ~~or claim 13~~, in which the anode used in the electro-reduction step is constituted by platinum, diamond-doped with boron

or carbon doped with nitrogen.

15. (Currently Amended) A process according to ~~one of claims 1 to 14~~ claim 1, in which the electro-reduction step b) is carried out in liquid CO₂ under pressure.
16. (Currently Amended) A process according to ~~one of claims 1 to 15~~ claim 1, in which the compound from electro-reduction step b) is oxalic acid or an oxalate.
17. (Original) A process according to claim 16, in which the oxalic acid or oxalate, obtained in a non-aqueous medium, is re-extracted using an aqueous phase.
18. (Currently Amended) A process according to ~~one of claims 1 to 17~~ claim 1 in which, at the end of step a), liquid CO₂ is injected into a subterranean CO₂ store.
19. (Original) A process according to claim 18, in which electro-reduction step b) is carried out in the subterranean CO₂ store.
20. (Currently Amended) A process according to ~~one of claims 1 to 18~~ claim 1, in which the final mineralization step consists of attack of a carbonated mineral by an aqueous solution of oxalic acid or formic acid from the electro-reduction step.
21. (Original) A process according to claim 19, in which said carbonated mineral consists of a calciferous or magnesia-containing carbonated mineral.
22. (Currently Amended) A process according to ~~one of claims 1 to 20~~ claim 1, in which the element M is calcium and the mineral formed is Whewellite, CaC₂O₄.H₂O.
23. (Currently Amended) A process according to ~~one of claims 1 to 21~~ claim 1, in which the mineralization step takes place by bringing the aqueous solution of oxalic acid or formic acid from the electro-reduction step into contact with a calciferous or magnesia-containing sedimentary rock.
24. (Currently Amended) A process according to ~~one of claims 1 to 22~~ claim 1, in which the final mineralization step is carried out by injection into the substratum.